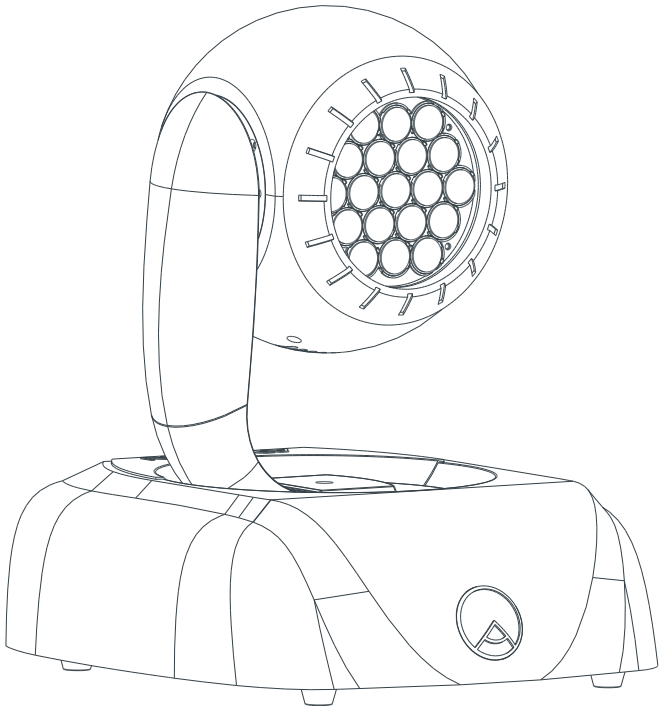
AYRTON

Light in action

easyColor

INSTRUCTION MANUAL



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Messages d'erreur & d'in

1. FOREWORD

We wish to express our gratitude for having chosen the AYRTON **EASYCOLOR** projector

WARNING !
This product is not intended for any domestic utilisation.

You now own a professional product with many functions. Before operating the unit, please make sure that the **EASYCOLOR** has not suffered any damage during transportation. Should any damage have occurred, please do not use the unit and contact your dealer/retailer immediately.

For further information or latest **EASYCOLOR** software updating, please visit our web-site www.ayrton-light.com**.**

For your personal and third party-safety, please read this owner's manual carefully before you operate the unit.

Persons involved with the installation, utilisation or maintenance of the **EASYCOLOR** must :

- Be qualified to make this type of intervention.
- Comply and follow the instructions contained in this manual.

Once manual has been thoroughly read, we recommend that you should file it for future reference.

2. SAFETY INSTRUCTIONS

Before using the **EASYCOLOR,** you must first read the safety instructions as well as the precautions to be taken.

CAUTION! ELECTRIC-SHOCK RISK

Handle this product with great care, unit needs high-voltage tension that can generate risk of electric shock.

Your **EASYCOLOR** has left our production facilities perfectly in mint conditions. Should you however detect a defect , please contact your dealer/retailer immediately before using the unit.

The manufacturer will not be held responsible for any resulting damages due to the inobservance of the safety instructions for the installation or mounting, contained in this manual ; as well as for any unauthorised modification of the **EASYCOLOR .**

Non-complying with given safety instructions for installation, mounting, and any unauthorised modification of EASYCOLOR, will result in the warranty to be voided.

Please verify that disposable voltage is not exceeding maximum tension authorised.

Ensure your electric installation complies with norms in force.

Please make sure that power-cable is integer and free from chinks, sharp-edges etc. Handle power-cable with extreme attention

EASYCOLOR conforms with class 1 of the security norms; earth connection is essential.

Installation and electrical connections must be done by qualified personnel. The manufacturer declines any responsibility for damages that might occur, in the event that installation had been carried out by an unqualified person.

When disconnecting **EASYCOLOR,** never pull the cable, instead grip on the plug and pull it out gently.

Never connect power-cable of **EASYCOLOR** if your hands are wet or humid.

Make sure that neither objects nor liquid are dropped inside the **EASYCOLOR**

When used for the first time, smoke or scent might be emitted from the **EASYCOLOR**. This is an harmless chemical process that will fade away after a few minutes of utilisation.

3. ENVIRONMENT UTILISATION

EASYCOLOR is an LED moving-head designated for professional utilisation (discotheques, architectural lighting, exhibition-halls, museums, TV studios, theatres, etc) **EASYCOLOR** has been conceived for indoor use only and on no account must it be utilised in adverse weather conditions (snow, rain, etc)

Condensation water might form on **EASYCOLOR,** in such cases :
- When heat-system is turned-on .
- Places with high presence of moisture and very humid condition
- When the unit is quickly moved from a cold place to a hot place

Should moisture form inside the unit(s), then it might not operate correctly. In this event, please wait until the unit(s) has reached room temperature.

Avoid shaking the **EYCOLOR** when handling or during operation.

Do not carry **EYCOLOR** by holding the movable-head as internal mechanisms can suffer serious damages. Always use the purposed carrying-handle located beneath the unit.

The installation point for **EASYCOLOR** is important. Always make sure that unit is not exposed to heat sources, humidity or dust. Keep away from flammable items and surfaces. Electrical cables must never be laid on the floor.

The minimum distance to be observed, between the outer lens and the illuminated surface, is of 0,3 Mt.

Do not obstruct ventilation vents. Allow 20 cm room all around the **EYCOLOR** to ensure adequate air-circulation

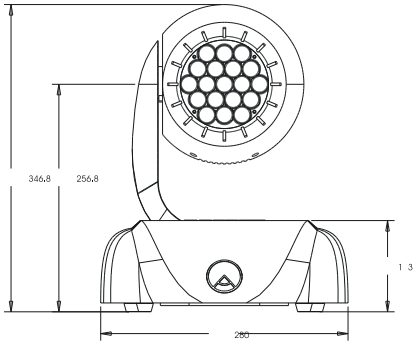
Room temperature must never exceed 40° C.

EASYCOLOR must be rigged-up and secured to the truss with safety-cord which is to be fitted in the correct hole located in the bottom of the unit.

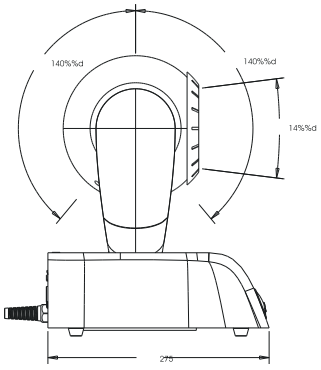
Do not hazard with the **EASYCOLOR** before you are familiar with the given recommendations. Never allow non-authorised , unqualified personnel with any kind of intervention to the unit.

Should **EASYCOLOR** be left idling for a long period, we strongly recommend it must be turned-off.
When **EASYCOLOR** is to be carried or moved to other locations, original packaging must be used.

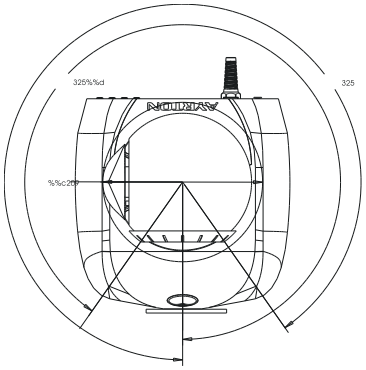
4. DIMENSIONS



(fig.01)



(fig.02)

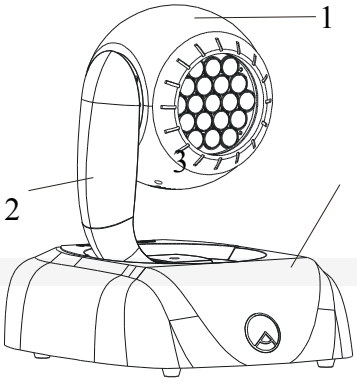


(fig.03)

5. DESCRIPTION

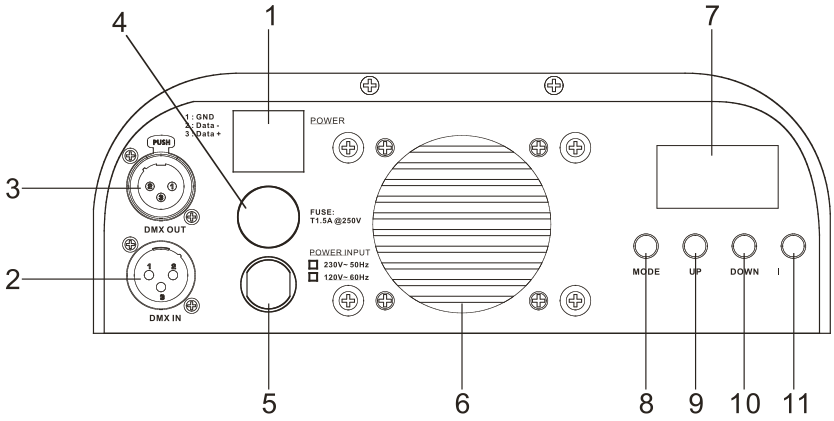
(fig.04)

1. Free-head
2. Moving-head
3. Base



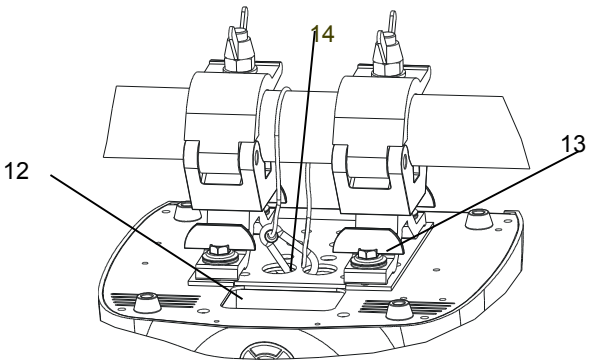
(fig.05)

1. ON/OFF button
2. DMX input
3. DMX output
4. Fuse-holder
5. Power-cable
6. Fan-grid
7. LCD display
8. Mode-button
9. Up-Button
10. Down-Button
11. Enter-button



(fig.06)

12. Carrying handle
13. « Camloc » fixing bolts
14. Safety-cord security point

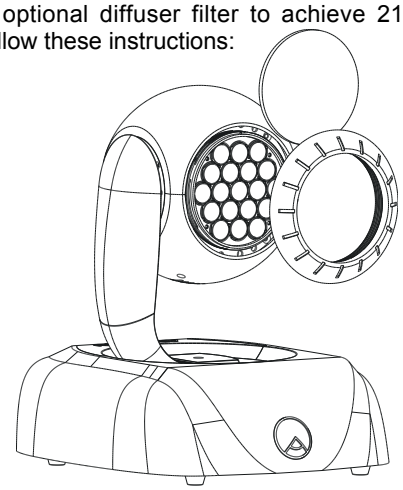


6. INSTALLATION

6.1 diffuser filter Installation to achieve 21° aperture

EASYCOLOR is delivered with an optional diffuser filter to achieve 21° when a wider aperture is required. When filter is used, please follow these instructions:

(fig.07)



Other types of diffuser filters can be used depending on which applications. It is essential though that filter diameter is of 106 mm.

6.2 Rigging of the projector

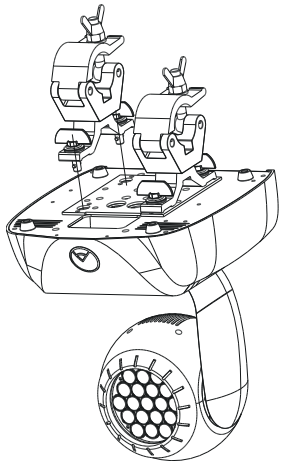
EASYCOLOR can operate if placed on the floor as well as in all positions when rigged up on truss. Installation positions will not affect operations of the unit

EASYCOLOR is delivered with two Omega aluminium stands. (you will find these parts outside the Polystyrene forms)

When installing **EASYCOLOR** use the G-Clamps with M12 thread-screw (G-clamp not delivered).G-clamps must be approved and must sustain 10 times the weight of the unit . Test G-clamp allowing 1 hour to elapse, which then must not present any sign of distortion.

Never use carrying handle to install **EASYCOLOR**.

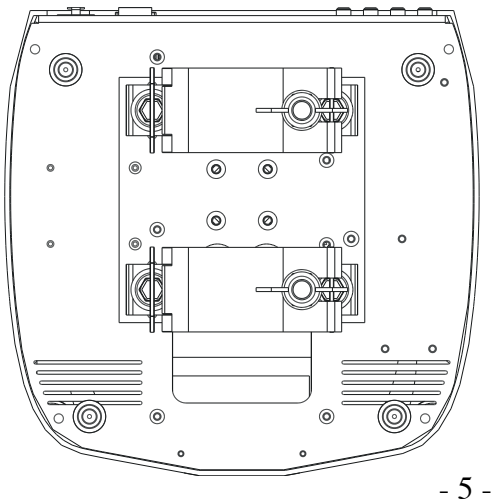
Install each Omega stand to a G-clamp using a 12M thread-screw and bolt. Set the two Omega stand on to the base fixing holes C1, C2, C3 & C4. Choose suitable position for your installation. Tighten screw clockwise by 1/4 turn (see **Fig.**)

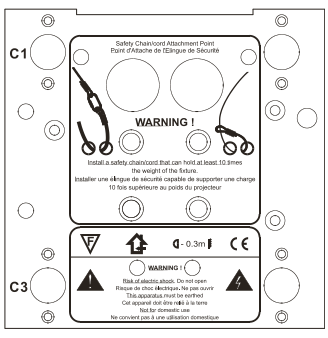


Before installing **EASYCOLOR** to the truss, make sure that covers and accessories are firmly tightened and secured.

Install **EASYCOLOR** on the truss by placing base towards area to be illuminated. Make sure to tighten G-clamp firmly.

The use of an additional and independent safety-cord is essential to protect accidental failure of the primary suspension point. This safety-cord must bear at least 10 times the weight of the unit. The safety-cord must be fitted in the provided hole under the base (see **Fig.**)





6.3 Connection to mains of the projector

Connect the power-cable of the **EASYCOLOR** directly to the mains. Never connect unit to dimmer points as unit could be damaged .

A good earth connection of the **EASYCOLOR** is essential.

Table of possible connections

Connections		**Marks**	
wire	**core**	**International**	**UK**
Brown	Phase	L	Red
Bleu	neuter	N	Black
Yellow/Green	Earth		Green

To power **EASYCOLOR** set breaker to « I « position

6.4 DMX 512 Connections

Cables must comply with EIA 422A & EIA 485 norms. Only use shielded cables twisted in pairs.

Never use microphone-cables as transmissions are unreliable on long distances. When used for over 300 Mt a signal amplifier is necessary.

Connect DMX cable from controller to the base of DMX IN of the first **EASYCOLOR**.

Set-up a serial DMX- line by connecting DMX-output of the first **EASYCOLOR** with the DMX-input of the next unit. Repeat the same procedure until all units are connected.

To ensure reliable transmission information, make sure to end-up last dmx-cable with a terminator. To accomplish with this operation solder a 120 Ohm resistor between cores 2&3 of a 3-pin XLR-plug. This terminator must be situated on the DMX-output of the last **EASYCOLOR** dmx-line

7. PROTOCOL

Ch 16 bit	Ch 8 bit	Value	%	Mode	Type of control
1	**1**	0-255	0-100	**Pan** Pan movement adjustment on 530°	Proportional
2		0-255	0-100	**Fine Pan adjustment** (When high resolution is on) Fine Pan movement adjustment	Proportional
3	**2**	0-255	0-100	**Tilt** Tilt movement adjustment on 530 °	Proportional
4		0-255	0-100	**Fine Tilt adjustment** (When High resolution is on) Fine Tilt movement adjustment	Proportional
5	**3**	0-255	0-100	**Red** 0 = Black – 255 = Red @ 100%	Proportional
6	**4**	0-255	0-100	**Green** 0 = Black – 255 = Green @ 100%	Proportional
7	**5**	0-255	0-100	**Blue** 0 = black – 255 = Blue @ 100%	Proportional
8	**6**	0-9	0-4	**Rainbow** off	Stepping
9	**7**	0-9	0-4	**Stroboscope** off	Stepping

8. CONTROL

The rear LCD display control panel located in the rear base of the **EASYCOLOR** allows you to select the address as well as the function criteria. LCD display shows also other information i.e. unit working hours, or unit internal temperatures. Should any failure occur, the problems will be shown on LCD-display.

When **EASYCOLOR** is powered on, after the welcome message, the LCD display will read DMX 512 signal set to address 1 by default

Press (MODE) to access Main Menu. This menu will access to 5 sub-menus.

Language
Menu

This Menu allows you to select language from the display. English language is set by default.

Menu
Address

This menu allows you to select address for each projector as well as the master/slave mode of the projector.

Menu
Informat

This menu allows you to obtain information relevant to **EASYCOLOR**, i.e. internal rate temperatures, unit working hours, unit serial number & software version.

Menu
Option

This menu allows you to set-up customised parameters as well mode operation of each **EASYCOLOR**

Menu Automat

This menu allows you to record internal cues without the use of any controller.

8.1 Language

EASYCOLOR uses a 16-digit LCD display arrayed on 2 lines to ease programming. The bright information displayed will avoid the hassle of numerous abbreviations.
To ease communication a selection of languages are provided. I.e. English, French, and Spanish . English is set by default.

To set your language of **EASYCOLOR** :

- Press (MODE) to access main menu
- Press (UP) & (DOWN) keys to browse through menu
- Select Menu (language) then press (ENTER)
- Select your language by pressing (UP) & (DOWN) keys
- Confirm by pressing (ENTER) key.
- Press (MODE) key to return to main Menu
  Should have you chosen French, after your confirmation, display must read as follows

French Selected

As from now all information displayed will be in French.

8.2 DMX Address

The DMX address is the first channel which **EASYCOLOR** responds to the controller instructions.
When high-resolution is set and address 21 is selected, channels used by **EASYCOLOR** will be from 21 to 30. Make sure there is no DMX channel overlap.

When same address is used for numerous **EASYCOLOR**, they all will receive the same information and the same sequence. This mode is significantly important during maintenance to detect working faults.

When **EASYCOLOR** is powered, LCD display will detect if DMX signal is received, if not displayed it reads the following message.

Dmx Absent

In this event please check the following:

- Ensure that cable between controller and projector is securely connected.
- Ensure cable or connectors are not defective.
- Ensure controller is powered or defective.

When DMX 512 signal is displayed, LCD will read the following message:

8.2.1 DMX ASSIGNMENT

To enter channel assignments to **EASYCOLOR:**

- Press (MODE) to access main menu
- Press (UP) & (DOWN) key to browse through menu
- Select Menu “Address” then press (ENTER)
- Select the “Change address” option than press (ENTER)
- Browse through (UP)& (DOWN) keys to select your address
- Press (ENTER) to confirm.
- Press (MODE) to return to main menu

8.2.2 Mode Master Assignment

This menu allows you to select operation mode of your **EASYCOLOR.** Should you not use external controller and wants to operate your unit on stand-alone mode, then select "Mode Master” function. In the event your projector is connected to a controller, we recommend it should be disconnected before selecting “Mode Master” function. This would avoid interference between the two systems.

- Press (MODE) to enter main-menu
- To browse through Menu press (UP) & (DOWN) keys
- Select “Address” menu than press (ENTER)
- Select “Mode Master” mode than press (ENTER)
- Browse through (UP) & (DOWN) keys to select your option
- Press (ENTER) to confirm.
- Press MODE to return to main menu

“Mode Master” option is idle by default.

8.3 Information

Information relevant to your EASYCOLOR is available in this menu. This side-menu has 5 sub-menus

8.3.1 Hour-meter

This menu allows you to read information regarding your **EASYCOLOR** working hours.

Hour-Meter

Hour-Meter will tally information relevant to **EASYCOLOR** total working hours since the unit left production plant. It is not possible to re-set meter to zero not even when software updating is effected.

- Press (MODE) to access “Hour Meter” menu
- Browse through (UP) and (DOWN) keys to select your menu option.
- Select “Total Hours “ menu then press (ENTER)
- Total elapsed hours will be displayed on LCD
- Press (MODE) to return to main menu

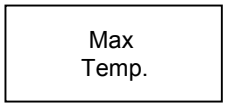
An additional “partial hour-meter” will allow you to read the **EASYCOLOR** working hours. This hour-meter can be re-set to zero.

- Press (MODE) to select “Hour-Meter” menu
- Browse through (UP) & (DOWN) keys to select your menu option.
- Select “partial hour-meter” menu than press (ENTER)
- Total number of hours will be displayed on the LCD
- Press (MODE) to return to main menu

To re-set Partial-Hour-Meter to zero, hold button (ENTER) for a few seconds. When meter shows zero, release the button.

8.3.2 Maximum Temperature

This menu gives access to information relevant to monitor internal temperature of the **EASYCOLOR** head. Temperatures are expressed in Celsius degrees. Internal temperature of the head must not exceed 72° C. beyond this limit, projector will automatically switch onto security mode. We remind you that ambient temperature must not exceed 40° C.



It is possible to view recorded max temp of the head of your **EASYCOLOR** since the unit left production plant. It is not possible to re-set meter to zero not even when software updating is effected

- Press (MODE) to access “Max Temp” menu
- Browse through (UP) & (DOWN) keys to enter menu option
- Select “Tot. Max Temp” menu then press (ENTER)
- Max-temp recorded of the meter will be displayed on LCD
- Press (MODE) to return to main menu

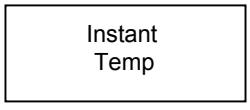
An additional “hour-meter” (“Partial Max Temp”) will allow you to read the EASYCOLOR partial working hours (maximum temperature). This “hour-meter” (“Partial Max Temp”) can be re-set to zero.

- Press (MODE) to access “Max Temp” menu
- Browse through (UP) & (DOWN) keys to enter menu option.
- Select “Partial Max Temp” menu then press (ENTER)
- Partial Max-temp recorded of the meter will be displayed on LCD
- Press (MODE) to return to main menu

To re-set Partial-Hour-Meter (Partial Max Temp) to zero, hold button (ENTER) for a few seconds. When meter shows zero, release the button.

8.3.3 Instant Temperature

This Menu allows you to read information relevant to instantly head internal temperature of your **EASYCOLOR**. Temperatures are expressed in Celsius degrees. Internal temperature of the head must not exceed 72° C. beyond this limit, projector will automatically switch onto safety mode. We remind you that ambient temperature must not exceed 40° C.

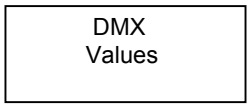


- Press (MODE) to access “Instant Temp” menu
- Press (ENTER) to confirm your selection
- Instant Temperature is now displayed on LCD

- Press (MODE) to return to main menu

8.3.4 DMX Values

This menu allows you to read information relevant to input value of each DMX channel of your **EASYCOLOR.**



- Press (MODE) to access " DMX Values" menu
- Browse through (UP) & (DOWN) keys to select you channel
- Press (ENTER) to confirm your selection
- DMX value will be displayed on the LCD
- Press (MODE) to return to main menu

8.3.5 Software Version

This menu allows you to retrieve information relevant to the software version used by your **EASYCOLOR**

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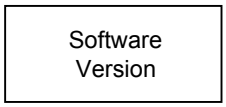
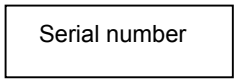


- Press (MODE) to access " Software version " menu
- Press (ENTER) to confirm your selection.
- Software version number will be displayed on the LCD
- Press (MODE) to return to main menu

8.3.6 Serial n.

This menu will allow you to read information relevant to the Serial number of your **EASYCOLOR.** This will enable you to identify your projector at any time.



- Press (MODE) to access " Serial Number " menu
- Press (ENTER) to confirm your selection.
- Serial number of your projector will be displayed on the LCD
- Press (MODE) to return to main menu

8.4 Options

This menu allows you to establish your personal parameters as well as operation mode of your **EASYCOLOR**. This side-menu is divided into 6 sub-menus

8.4.1 PAN Movement Inversion

This menu allows you to reverse PAN movement of your **EASYCOLOR.**

- Press (MODE) to access " Pan Inversion " menu
- Press (ENTER) to confirm your selection.
- Browse through (UP) & (DOWN) keys to select "PAN Inversion" option
- Press (ENTER) to confirm your selection
- Information now flashes on LCD, modification on the projector was successful
- Press (MODE) to return to main menu

Should you wish to disable this option, you only have to repeat instructions and then select "no PAN Inversion "

8.4.2 TILT Movement Inversion

This menu allows you to reverse TILT movement of your **EASYCOLOR.**

TILT Inversion

- Press (MODE) to access " TILT Inversion " menu
- Press (ENTER) to confirm your selection.
- Browse through (UP) & (DOWN) keys to select "TILT Inversion" option
- Press (ENTER) to confirm your selection
- Information now flashes on LCD, modification on the projector was successful
- Press (MODE) to return to main menu

Should you wish to disable this option, you only have to repeat instructions and then select "no TILT Inversion"

8.4.3 Swapping PAN & TILT Movements

This menu will allow you to swap PAN & TILT movements of your **EASYCOLOR.**

Swap PAN-TILT

- Press (MODE) to access " Swap PAN & TILT" menu
- Press (ENTER) to confirm your selection
- Browse through (UP) & (DOWN) keys to select "Swap PAN & TILT" option
- Press (ENTER) to confirm your selection
- Information will flash on the display; modification on the projector was successful
- Press (MODE) to return to main menu

Should you wish to disable this option, you only have to repeat instructions and then select "no Swap PAN & TILT)"

8.4.4 Disable automatic repositioning system

This Menu will allow you to disable automatic repositioning of your **EASYCOLOR**

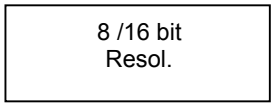
Auto Position

- Press (MODE) to access " Auto Position" menu
- Press (ENTER) to confirm your selection
- Browse through (UP) & (DOWN) keys to select " Auto Position " option
- Press (ENTER) to confirm your selection
- Information will flash on the display; modification on the projector was successful
- Press (MODE) to return to main menu

Should you wish to disable this option, you only have to repeat instructions and then select " no Auto Position"

8.4.5 Movement Accuracy

This menu will allow you to adjust movement resolution of your **EASYCOLOR** moving head. You may pick out two types of resolutions: 16-bit (high resolution) or 8-bit (low resolution). The number of DMX channels to be used will depend on your requirements : 9 channels for the 16-bit resolution mode or 7 channels for the 8-bit low resolution.

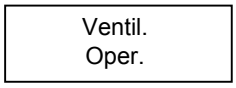


- Press (MODE) to access " 8/16 bit Resol." menu
- Press (ENTER) to confirm your selection
- Browse through (UP) & (DOWN) keys to select " 8/16 bit Resol " option
- Press (ENTER) to confirm your selection
- Information will flash on the display; modification on the projector was successful
- Press (MODE) to return to main menu

16-bit High resolution mode is disabled by default.

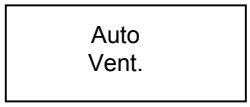
8.4.6 Ventilation system operation

This menu will allow you to apply ventilation system of **EASYCOLOR** in accordance with your requirements



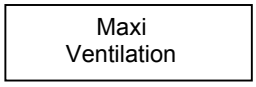
There are four utilisation options

(1) Automatic Mode: This function ensures extreme accuracy to the ventilation system. Speed control of fans of the head and base of your projector will depend on the internal temperature. Temperature detection is independent.



- Press (MODE) to access "Auto Vent." menu
- Press (ENTER) to confirm your selection
- Browse through (UP) & (DOWN) keys to select "Auto Vent " option
- Press (ENTER) to confirm your selection
- Information will flash on the display; modification on the projector was successful
- Press (MODE) to return to main menu

(2) Maximum Speed Mode. This mode enable the use of your projector in installations where ambient temperatures are high, e.g. discos. Fans are set to maximum speed. Max ventilation is set by default.



- Press (MODE) to access “Max Ventilation” menu
- Press (ENTER) to confirm your selection
- Browse through (UP) & (DOWN) keys to select “ Max Ventilation ” option
- Press (ENTER) to confirm your selection
- Information will flash on the display; modification on the projector was successful
- Press (MODE) to return to main menu

(3) Mini-Maxi Speed Mode. This mode diminishes fan noise while settings are being arranged; all internal components are ensured by perfect ventilations. Fans are used at minimum speed as long as internal temperature will not exceed authorised limit. Should maximum temperature rise, fans will operate at full speed.

Mini/Maxi Temp.

- Press (MODE) to access “ Mini/Maxi Temp ” menu
- Press (ENTER) to confirm your selection
- Browse through (UP) & (DOWN) keys to select “ Mini/Maxi Temp ” option
- Press (ENTER) to confirm your selection
- Information will flash on the display; modification on the projector was successful
- Press (MODE) to return to main menu

(4) Mini-Stop Speed Mode. This function is recommended when silence is required.
Fans are used at minimum rate as long as internal temperature does not exceed the authorised limit. Should max temperature pass the limit rise, power-contrivance will disconnect power to LEDs. Power will be reinstated when level temperature is permitted.

MiniStop Vent.

- Press (MODE) to access “ MiniStop Vent ” menu
- Press (ENTER) to confirm your selection
- Browse through (UP) & (DOWN) keys to select “ MiniStop Vent ” option
- Press (ENTER) to confirm your selection
- Information will flash on the display; modification on the projector was successful
- Press (MODE) to return to main menu

For obvious safety reasons, in any case, beyond critical threshold temperature, Power-contrivance will disconnect power to LEDs.

8.5 Self-Mode

This menu will allow you to configure your EASYCOLOR to be used without any controller

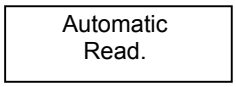
8.5.1 Program reading

This menu allows you to read the built-in program

Built -in Program.

8.5.2 Pre-set reading

This menu will allow you to run a pre-set built-in program when **EASYCOLOR** is powered



8.5.3 Program Editing

This menu will allow you to set-up or modify programs

9. INFORMATION

Messages d'erreur & d'in